



CHMURAECONOMICS&ANALYTICS

Council on Virginia's Future: State Perspective of Economic Growth

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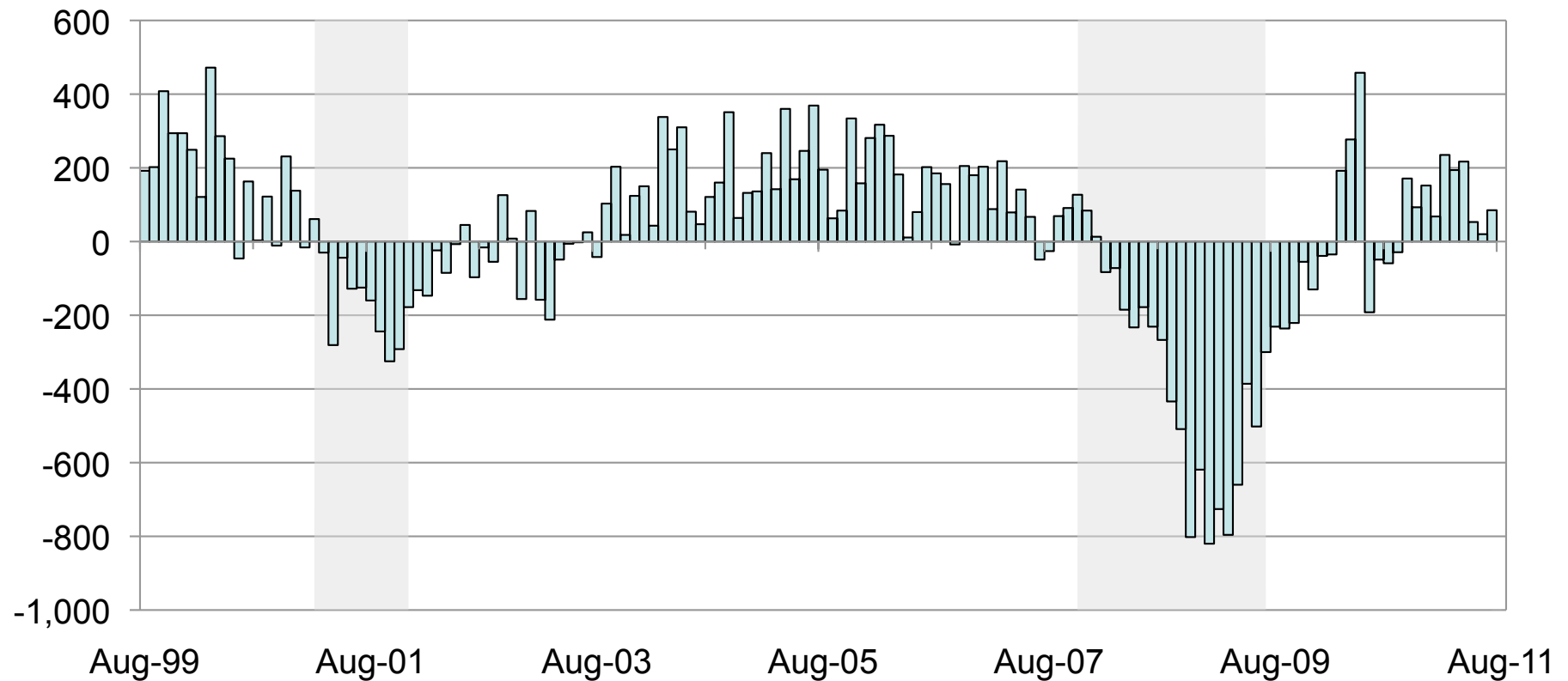
CHMURAECONOMICS&ANALYTICS

Strengthening Economic Growth and Driving Per Capita Income

- National economy is working against us...
slow growth
- Clusters
 - Change over time
 - Vary by region
- Clusters are tied to education/skills which
supports
 - Productivity
 - Wages

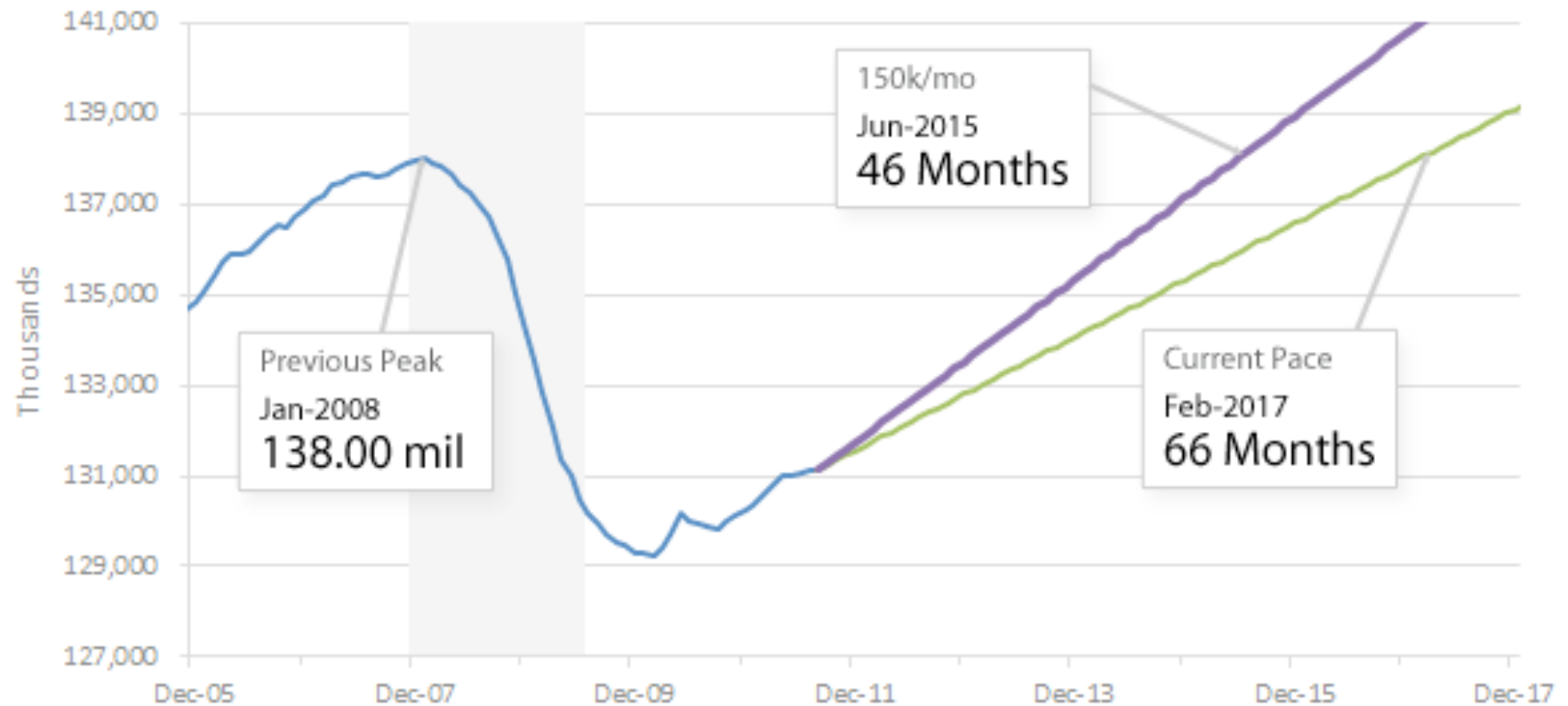
National Growth: Recession is Over But it Doesn't Feel Like it

Employment Growth
Monthly Change in Thousands



Source: Bureau of Labor Statistics.
Data through August 2011.

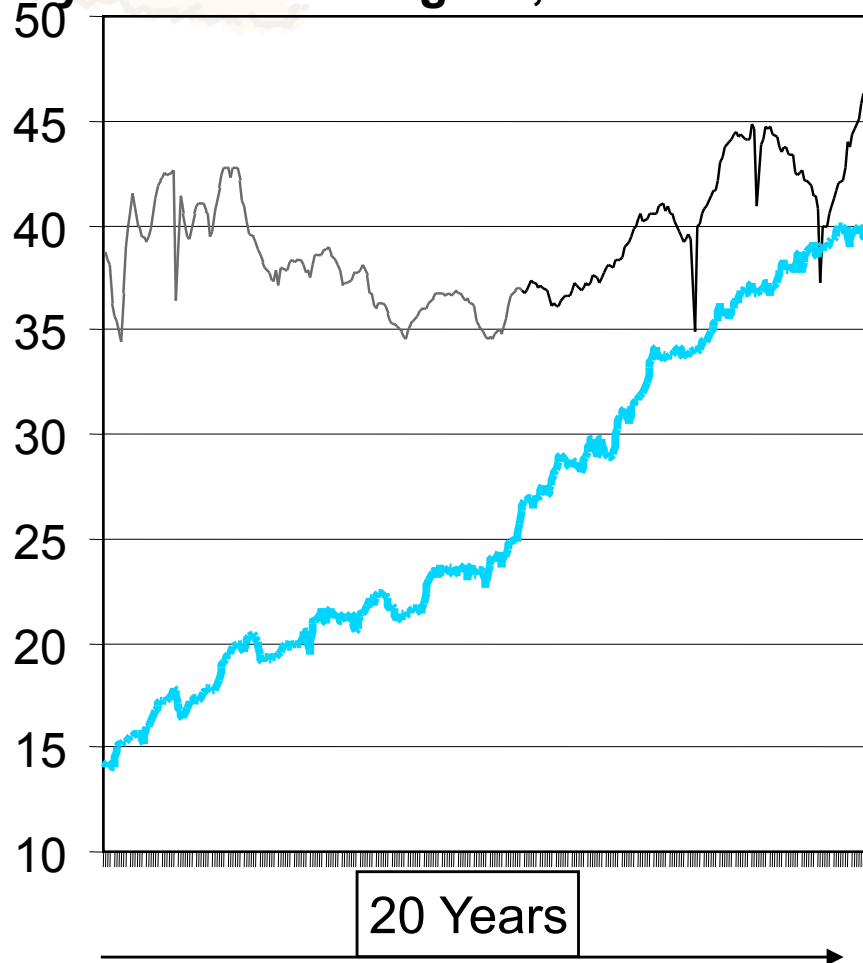
How Long to Get Back to Pre-Recession Employment Peak?



U.S. nonfarm employment; source: Bureau of Labor Statistics.
Graphic courtesy of Chmura Economics & Analytics.

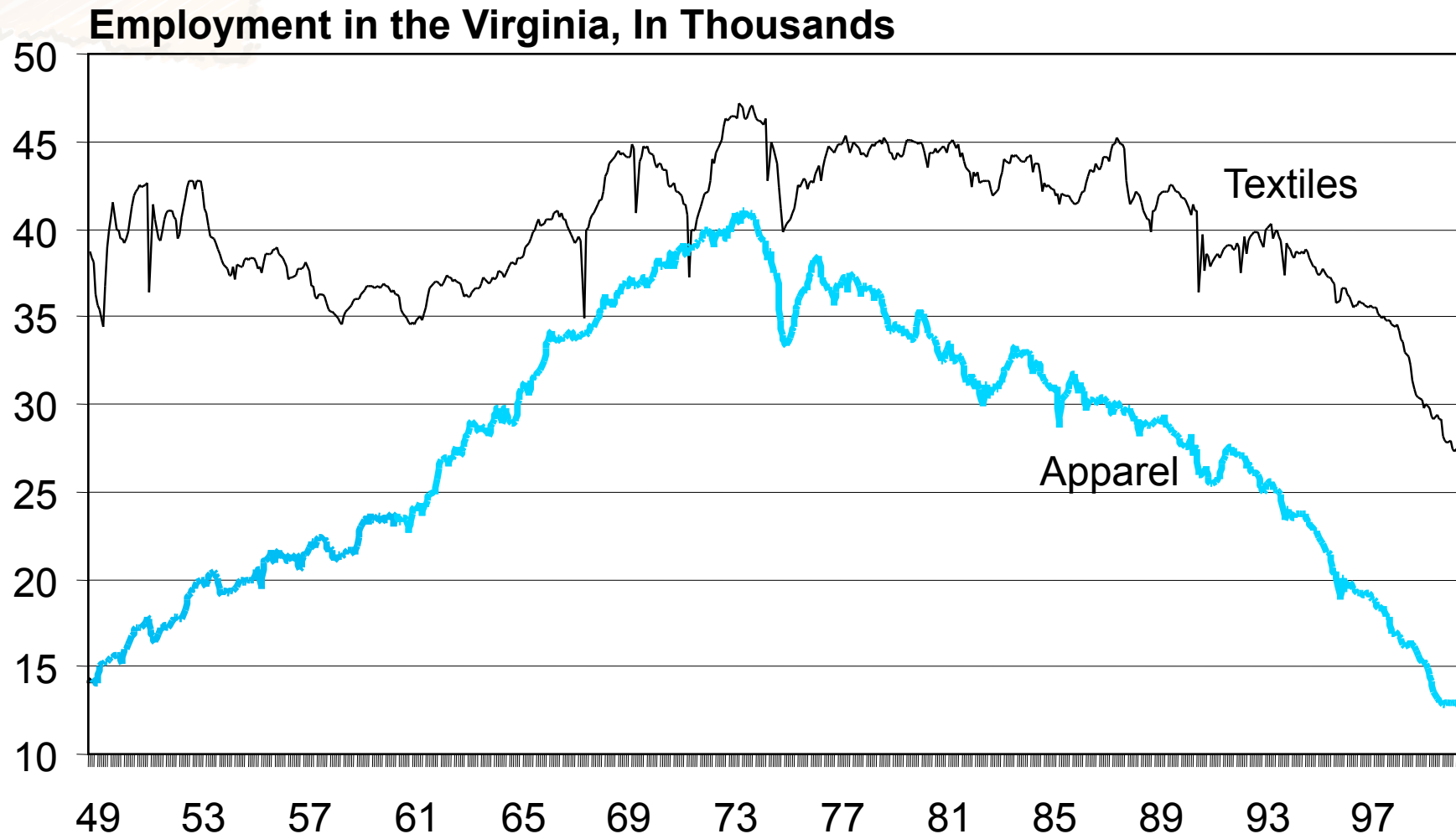
Local Industry Clusters Impact Regional Growth....

Employment in the Virginia, In Thousands



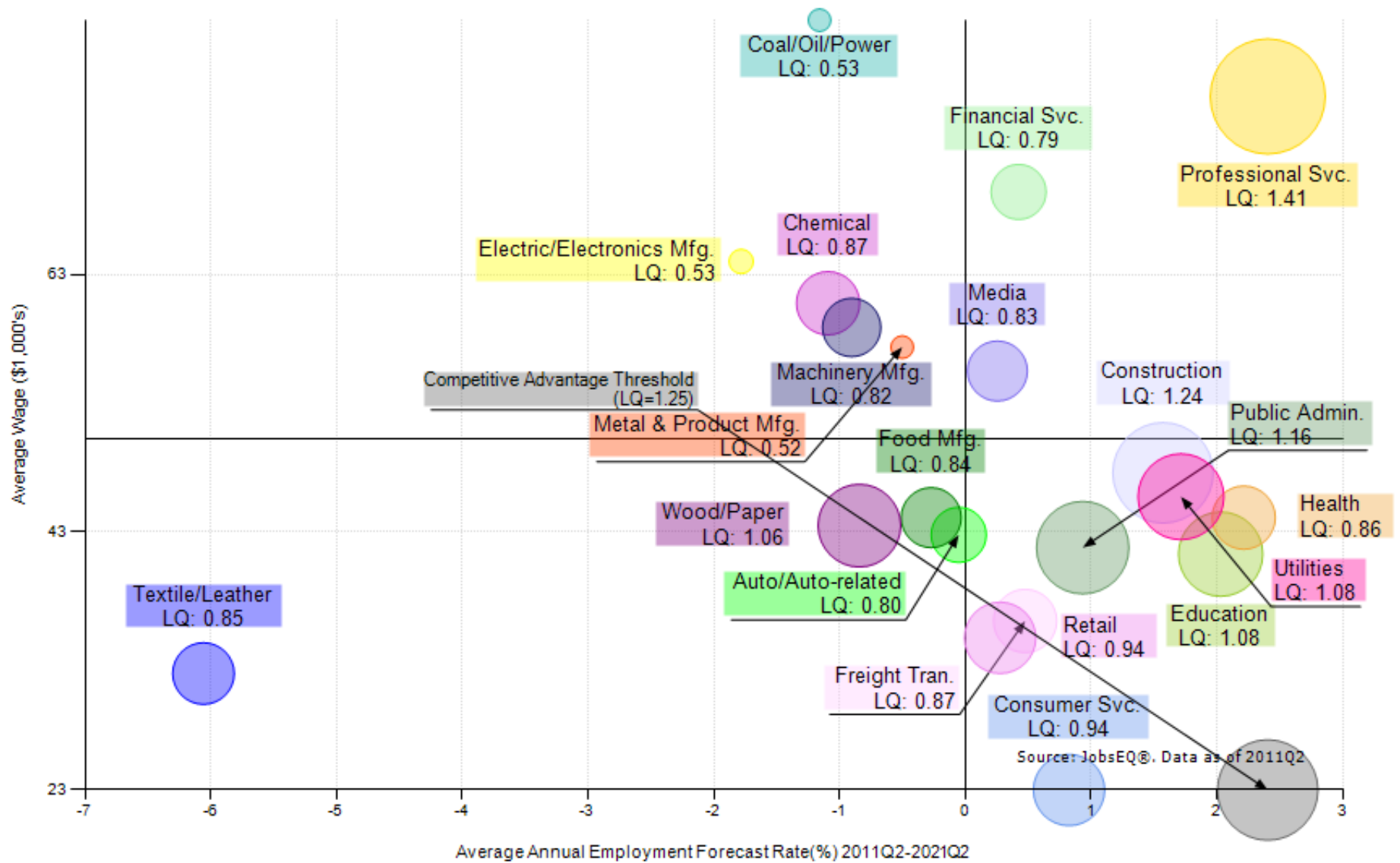
Industry Clusters are Important...

But there is Always Churn

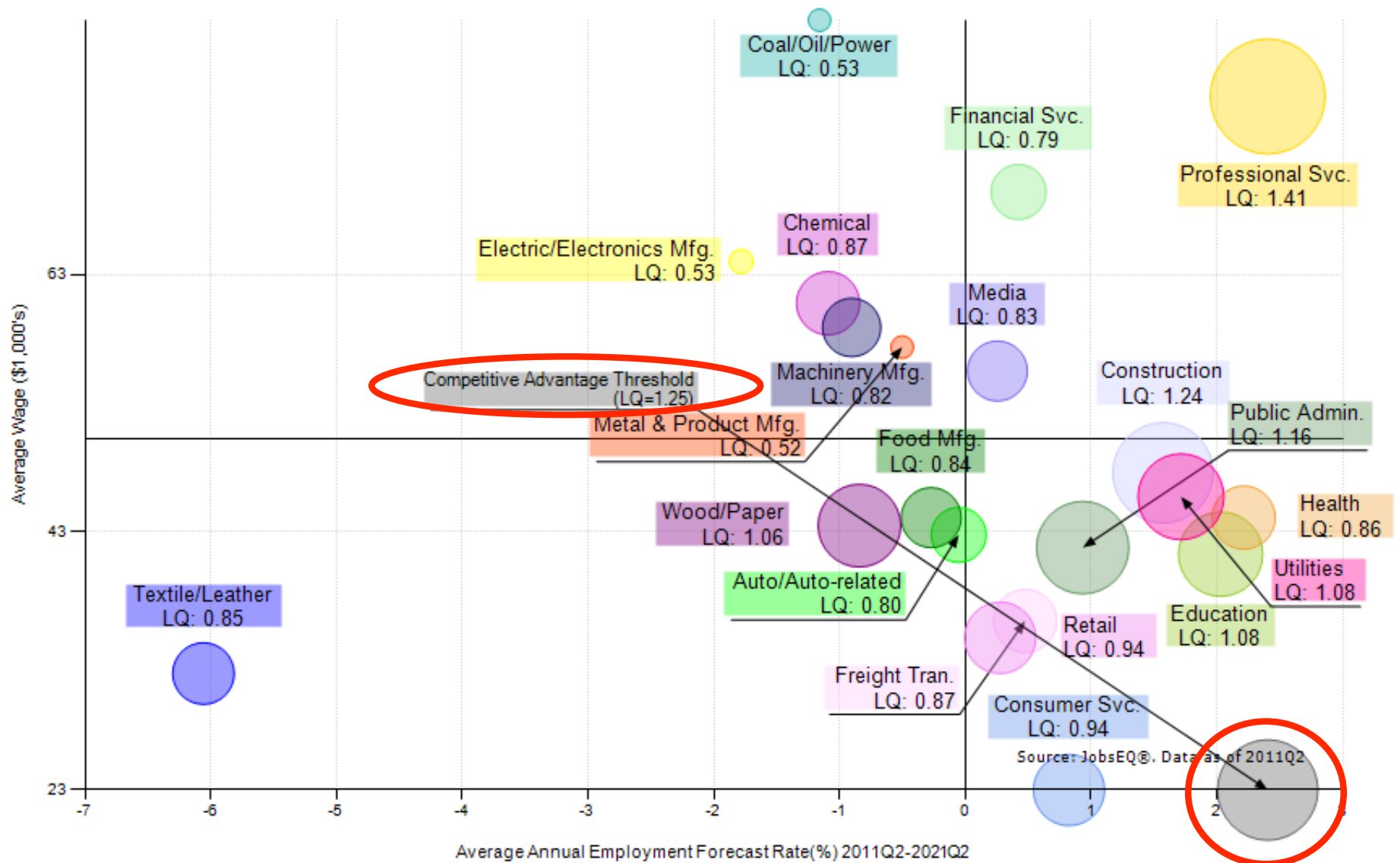


Data through August 2000.

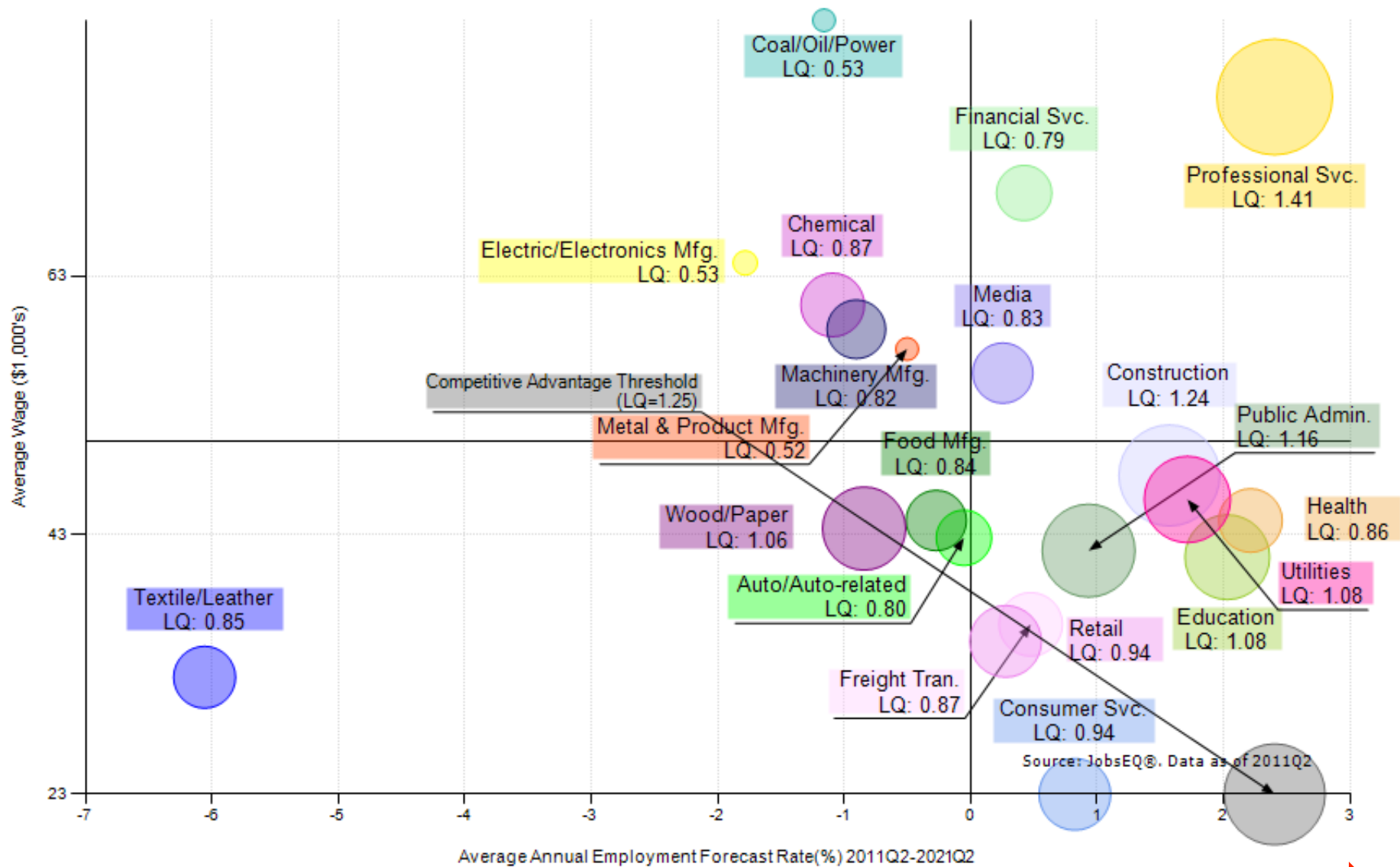
Industry Clusters for Virginia as of 2011Q2



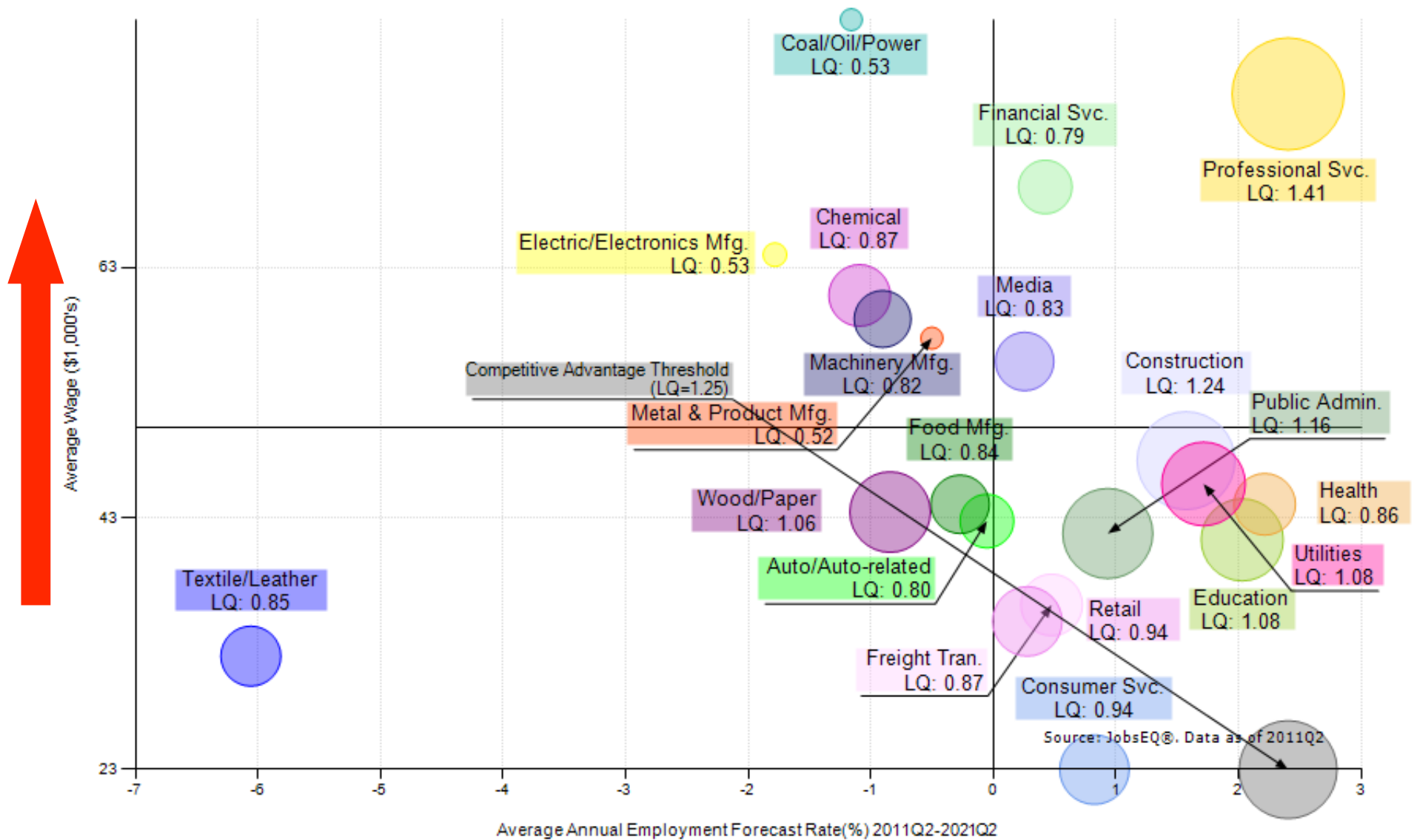
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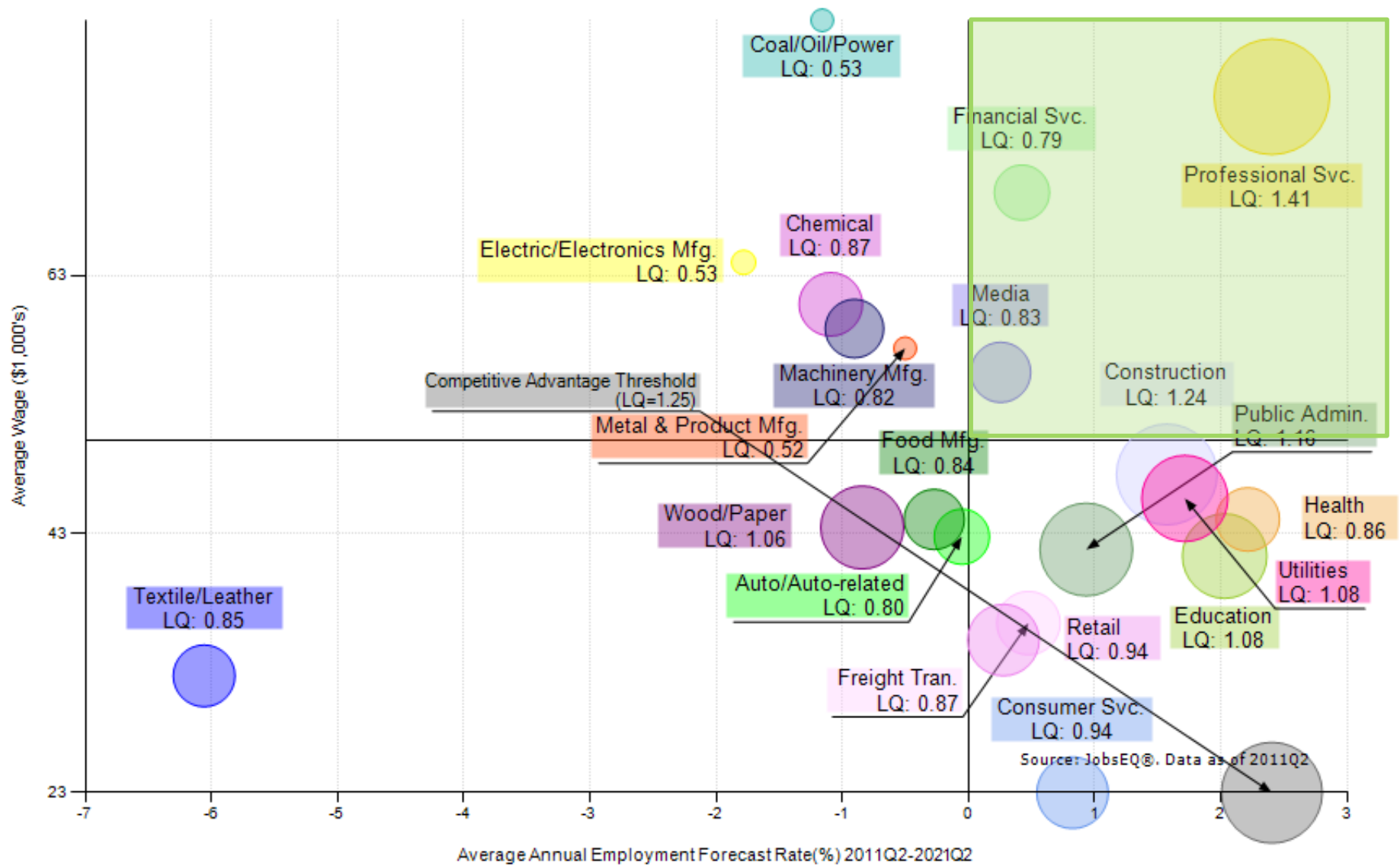
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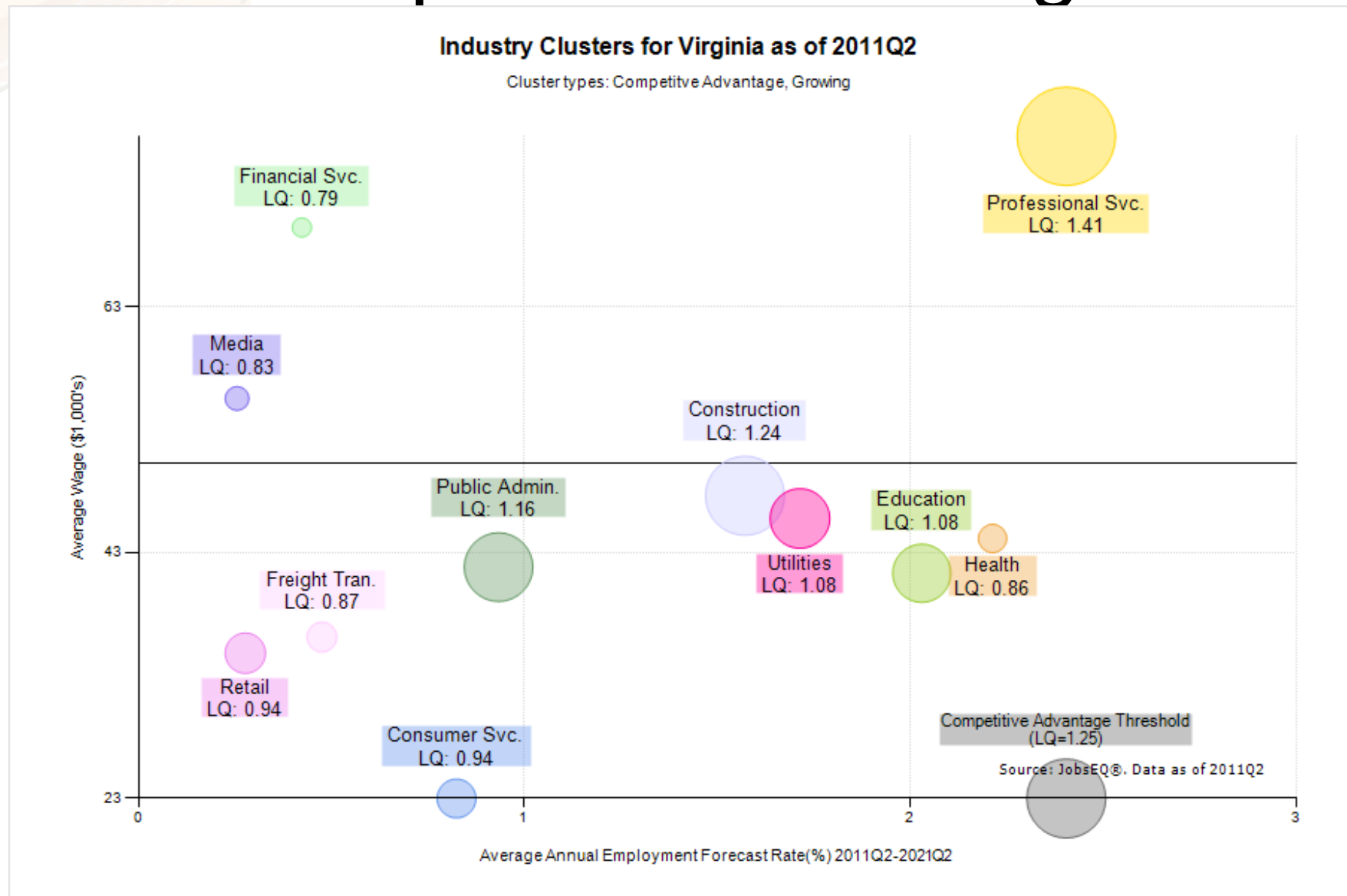
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Industry Clusters for Virginia as of 2011Q2

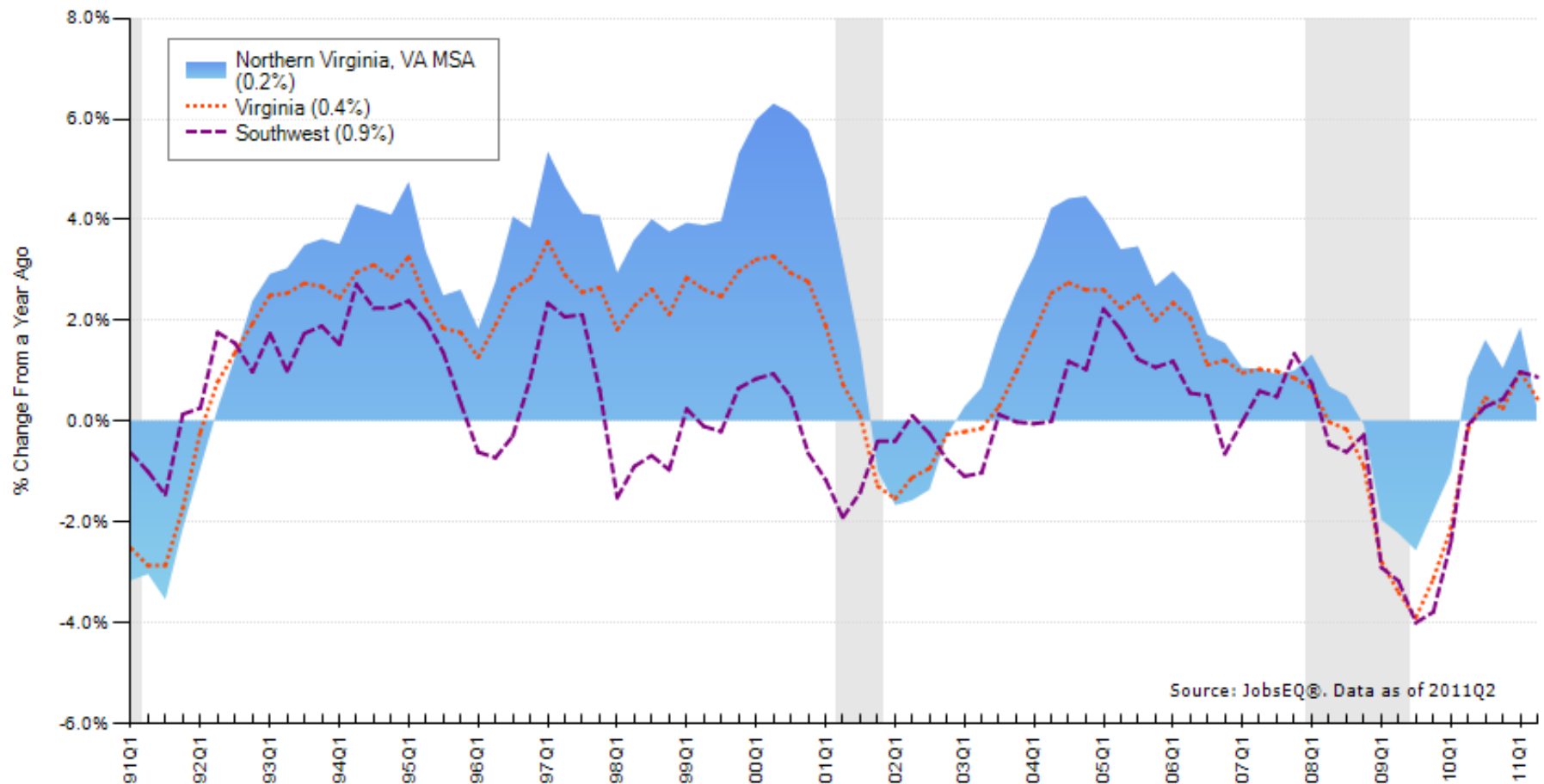


State Clusters: Growing and/or Competitive Advantage



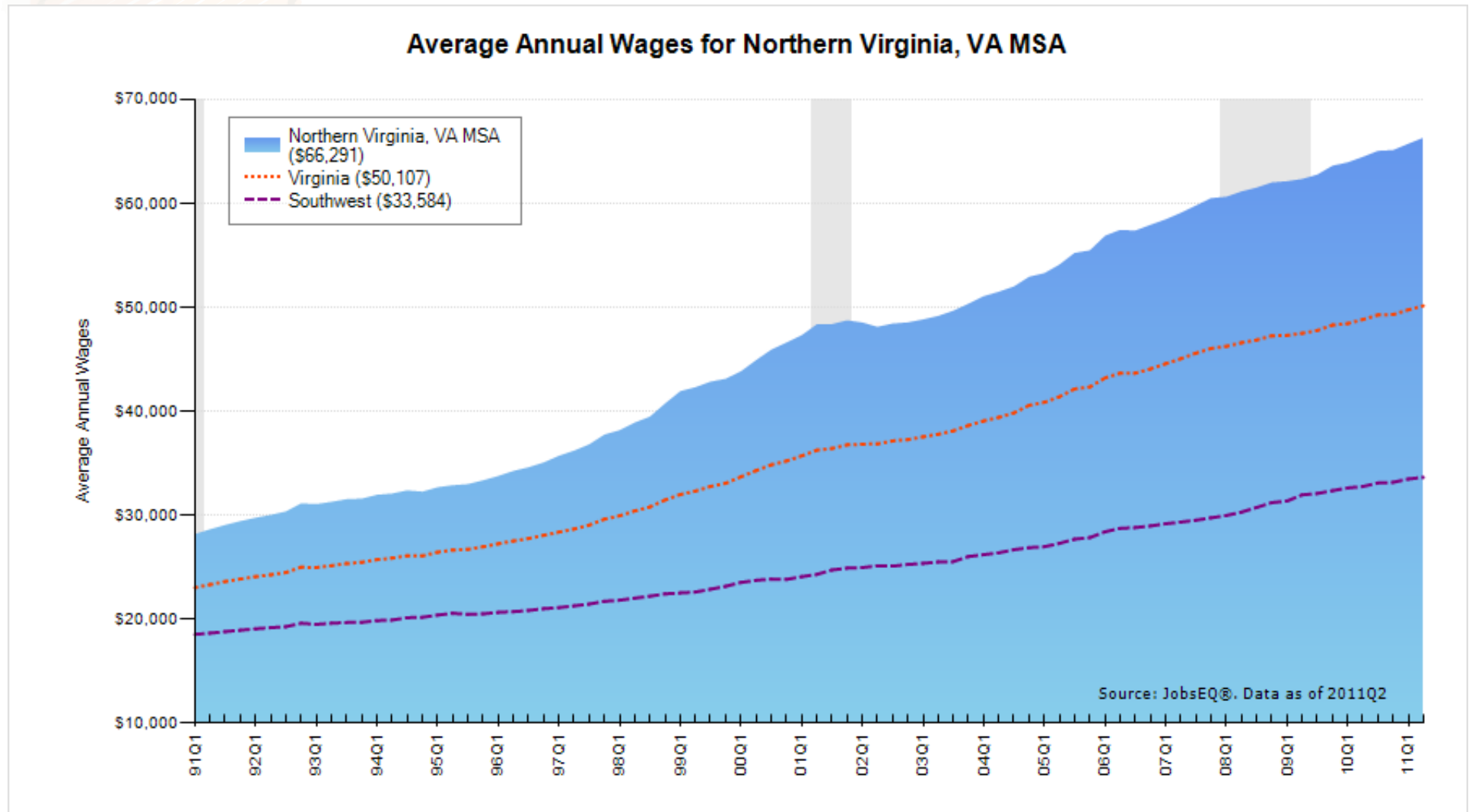
Contrasting Northern Virginia and Southwest Virginia

Employment for Northern Virginia, VA MSA



Source: JobsEQ®, Data as of 2011Q2

Cost of Living and Industry Mix Impacts Wage Levels

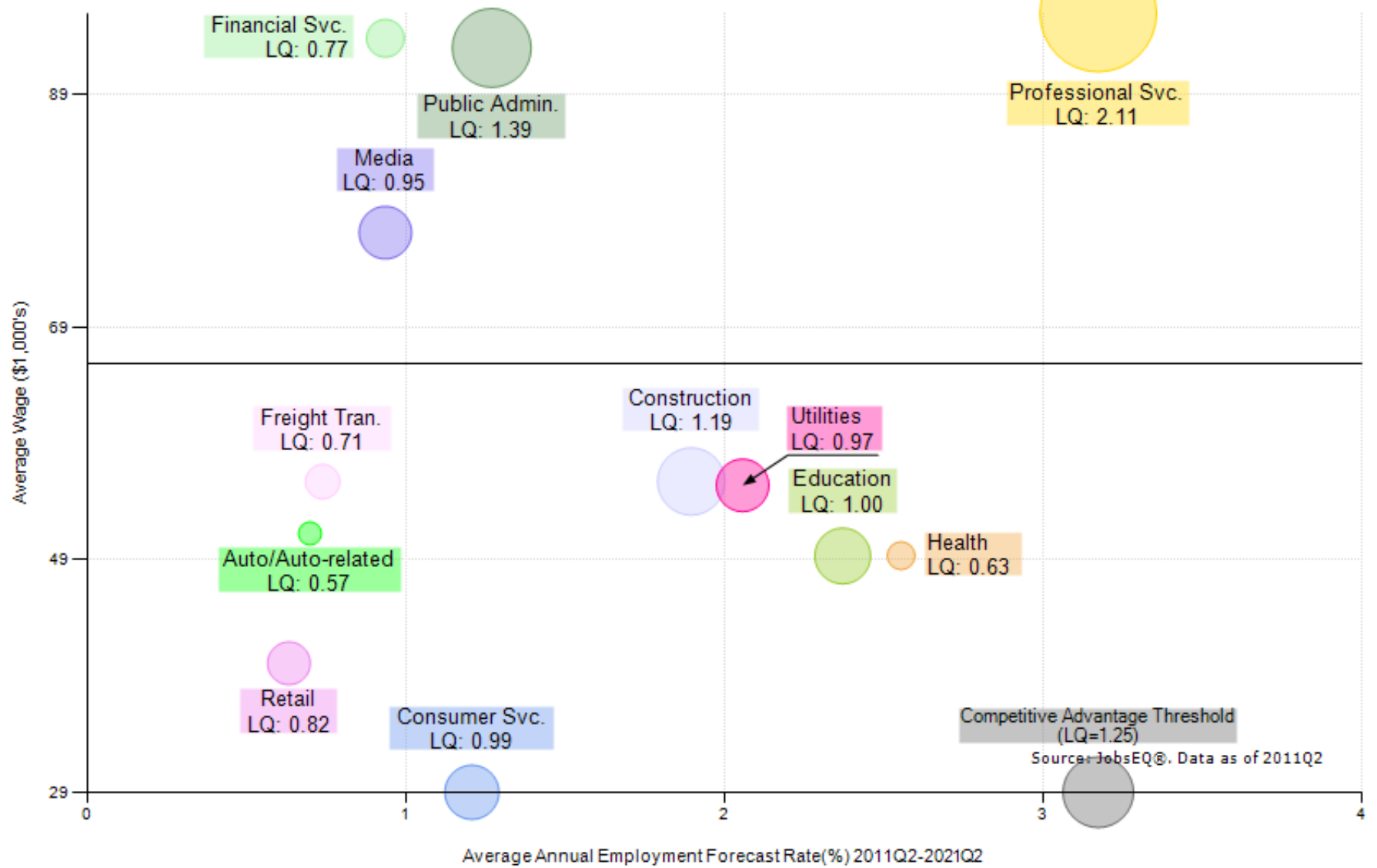


Educational Attainment Underpins Occupations in Industries

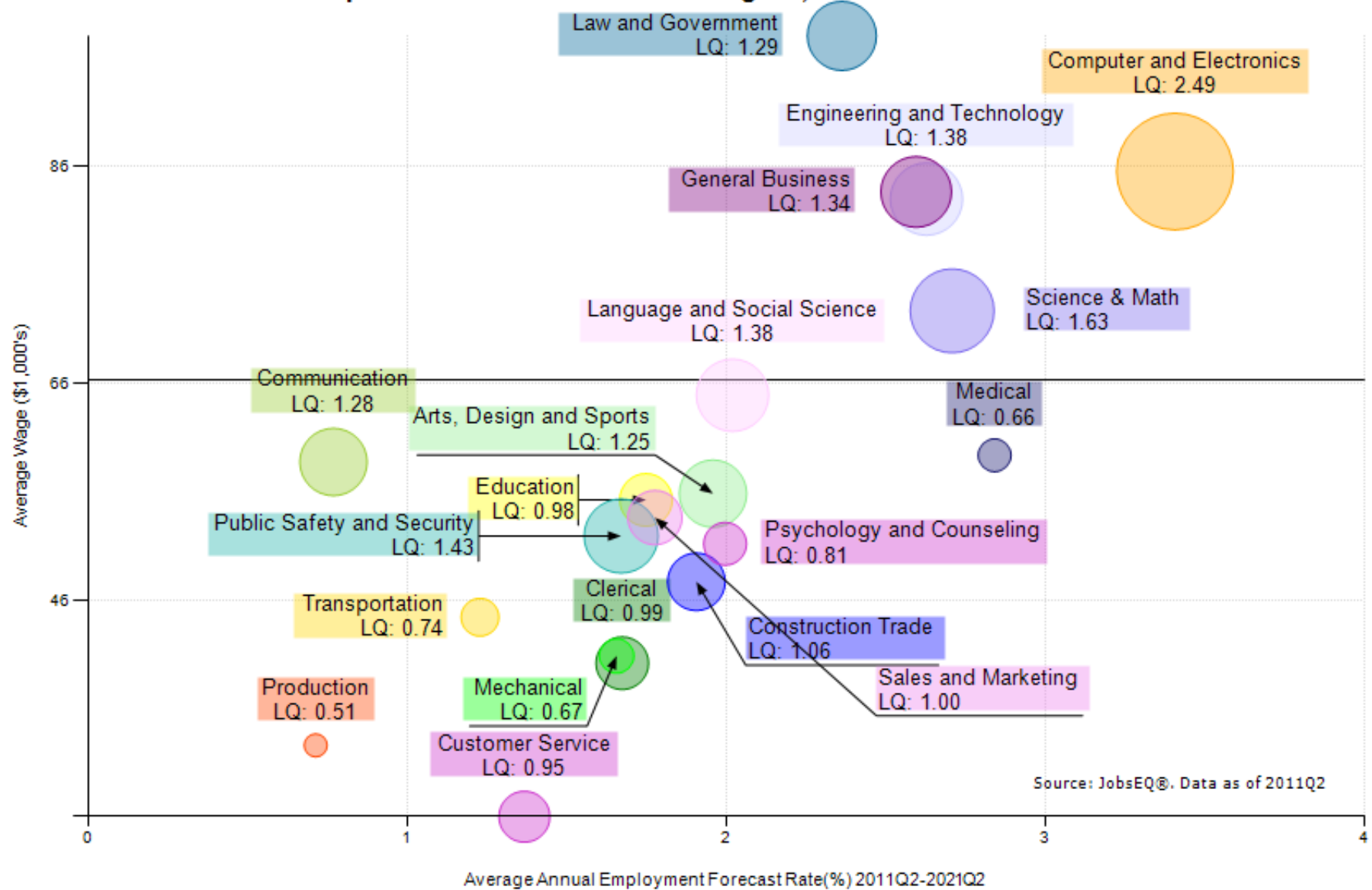
	25 Years and Over, 2005-2009		
	Southwest	Northern Virginia	Virginia
No High school Diploma	26.4%	9.0%	14.2%
High School Graduate	34.3%	17.3%	26.3%
Some College, No Degree	18.1%	16.1%	19.4%
Associate's Degree	7.7%	5.8%	6.6%
Bachelor's Degree	9.0%	28.6%	19.8%
Post Graduate Degree	4.5%	23.2%	13.6%

Source: ACS 2005-2009

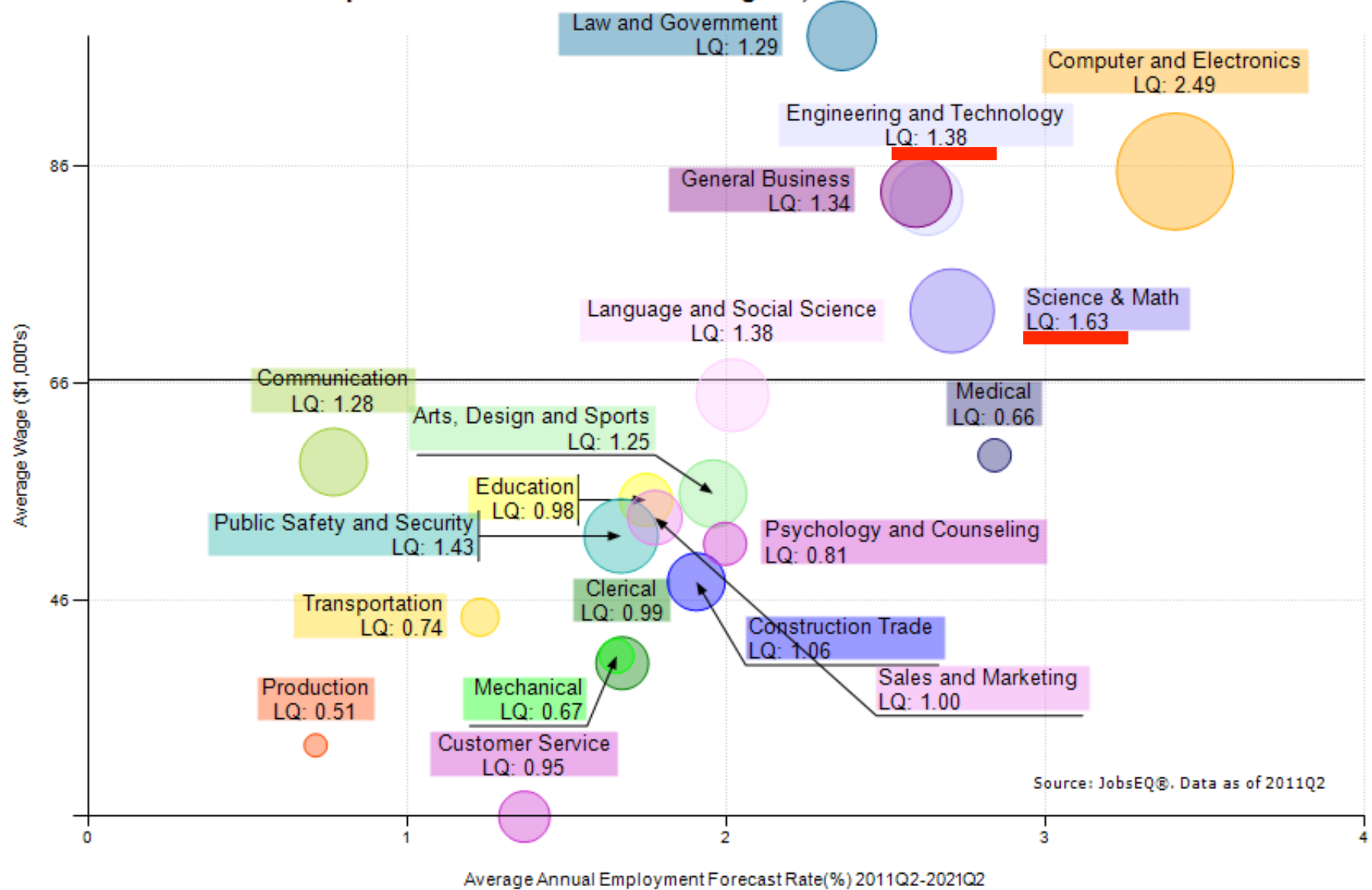
Industry Clusters for Northern Virginia, VA MSA as of 2011Q2



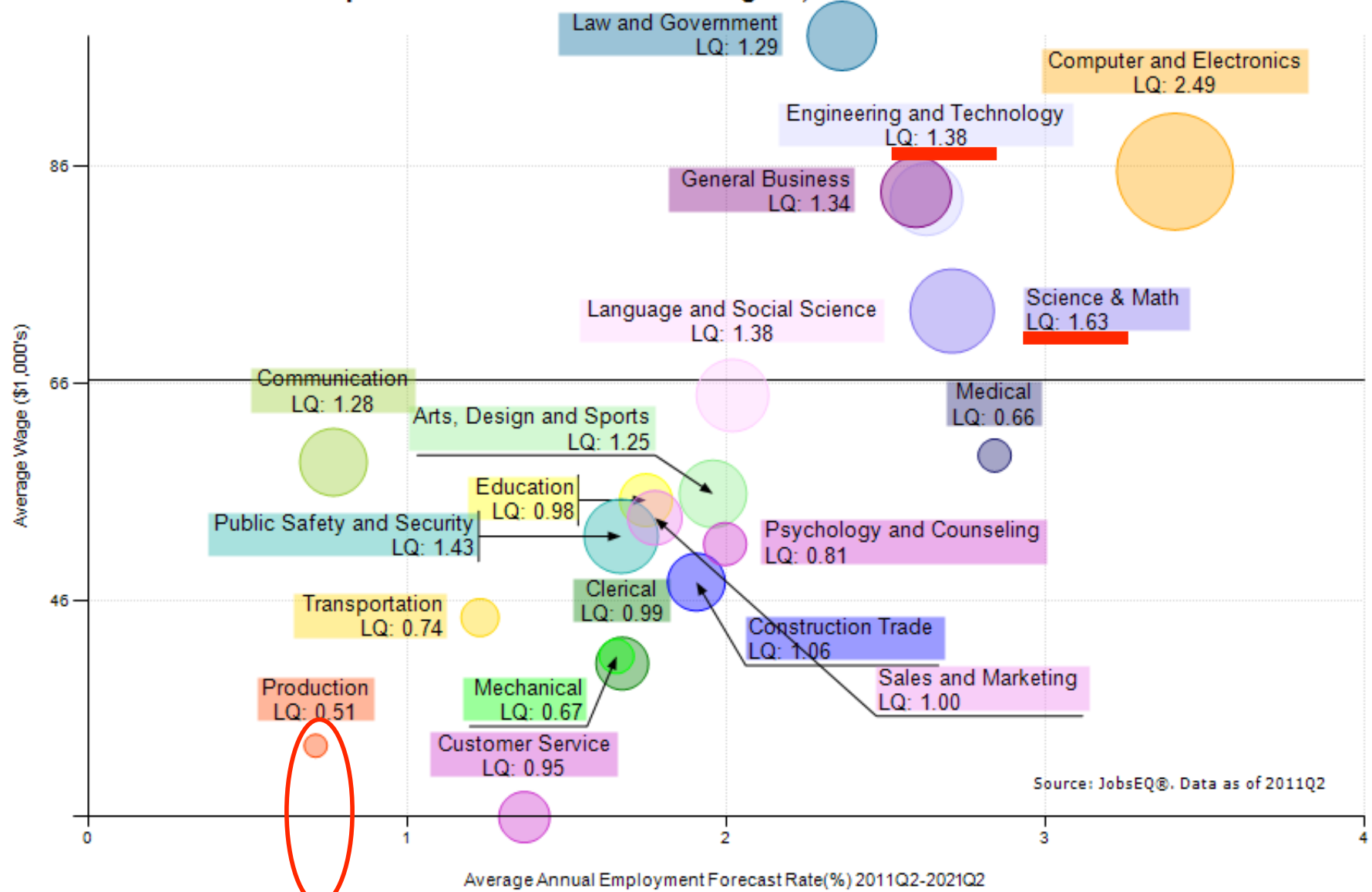
Occupation Clusters for Northern Virginia, VA MSA as of 2011Q2



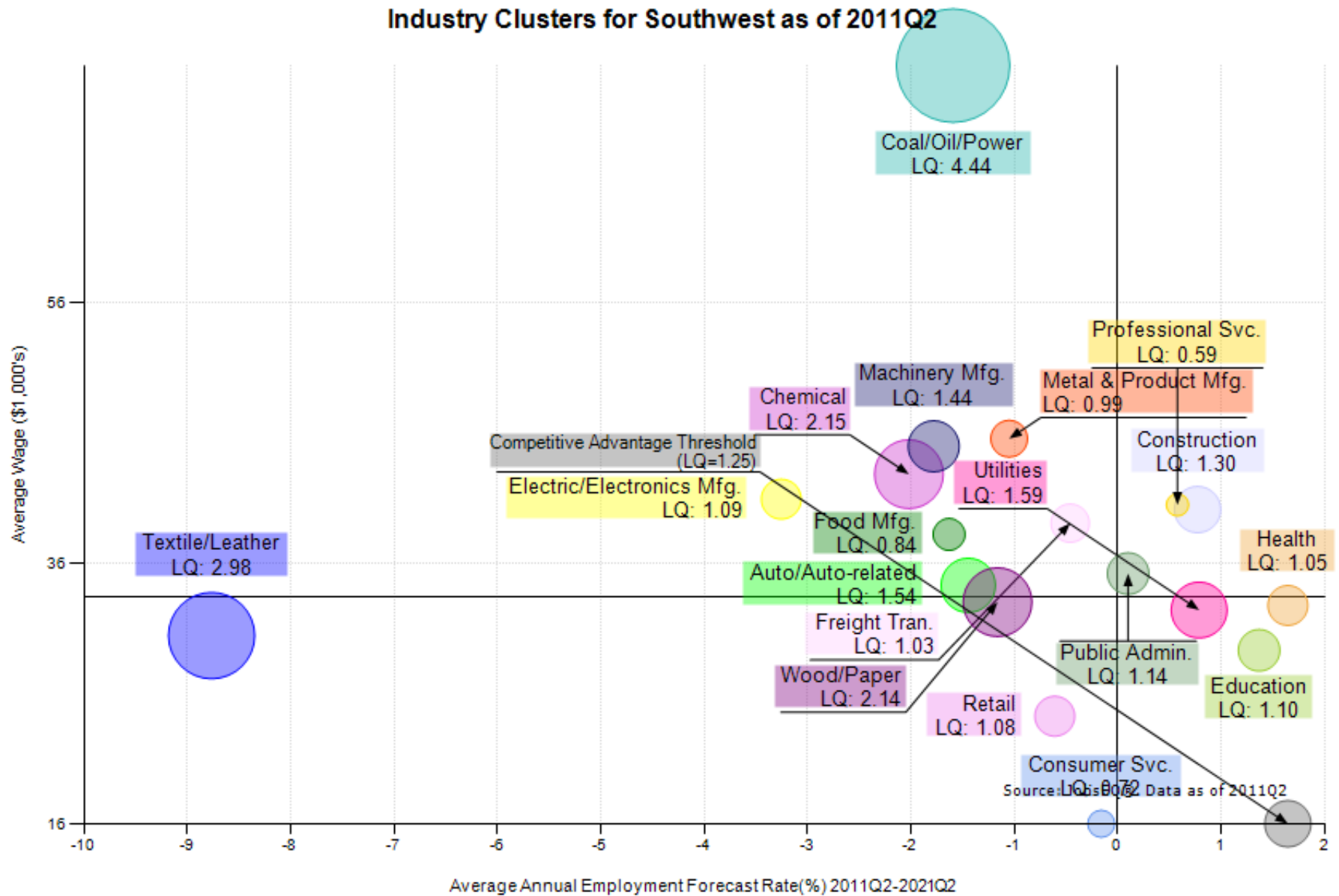
Occupation Clusters for Northern Virginia, VA MSA as of 2011Q2



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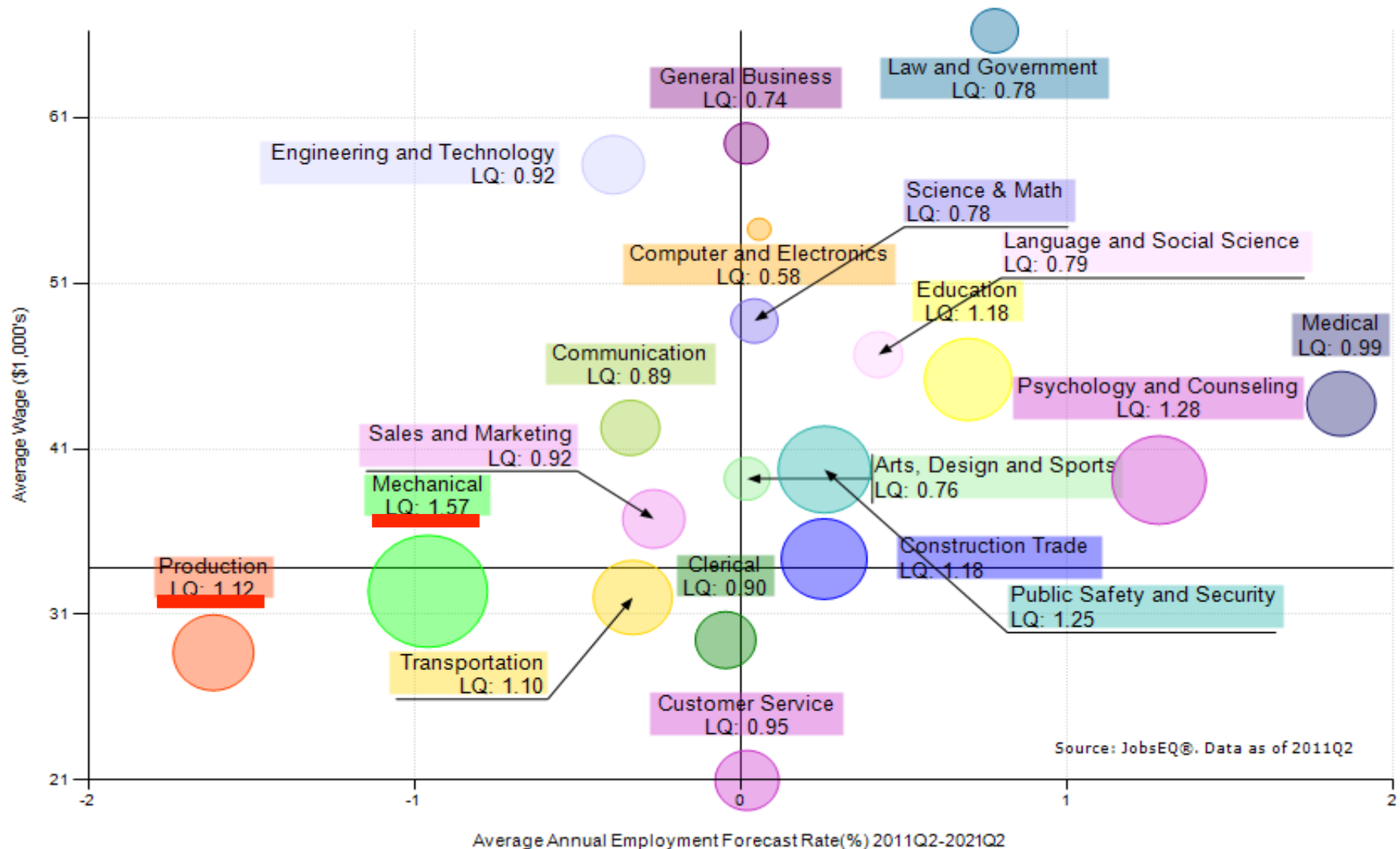


Industry Clusters for Southwest as of 2011Q2



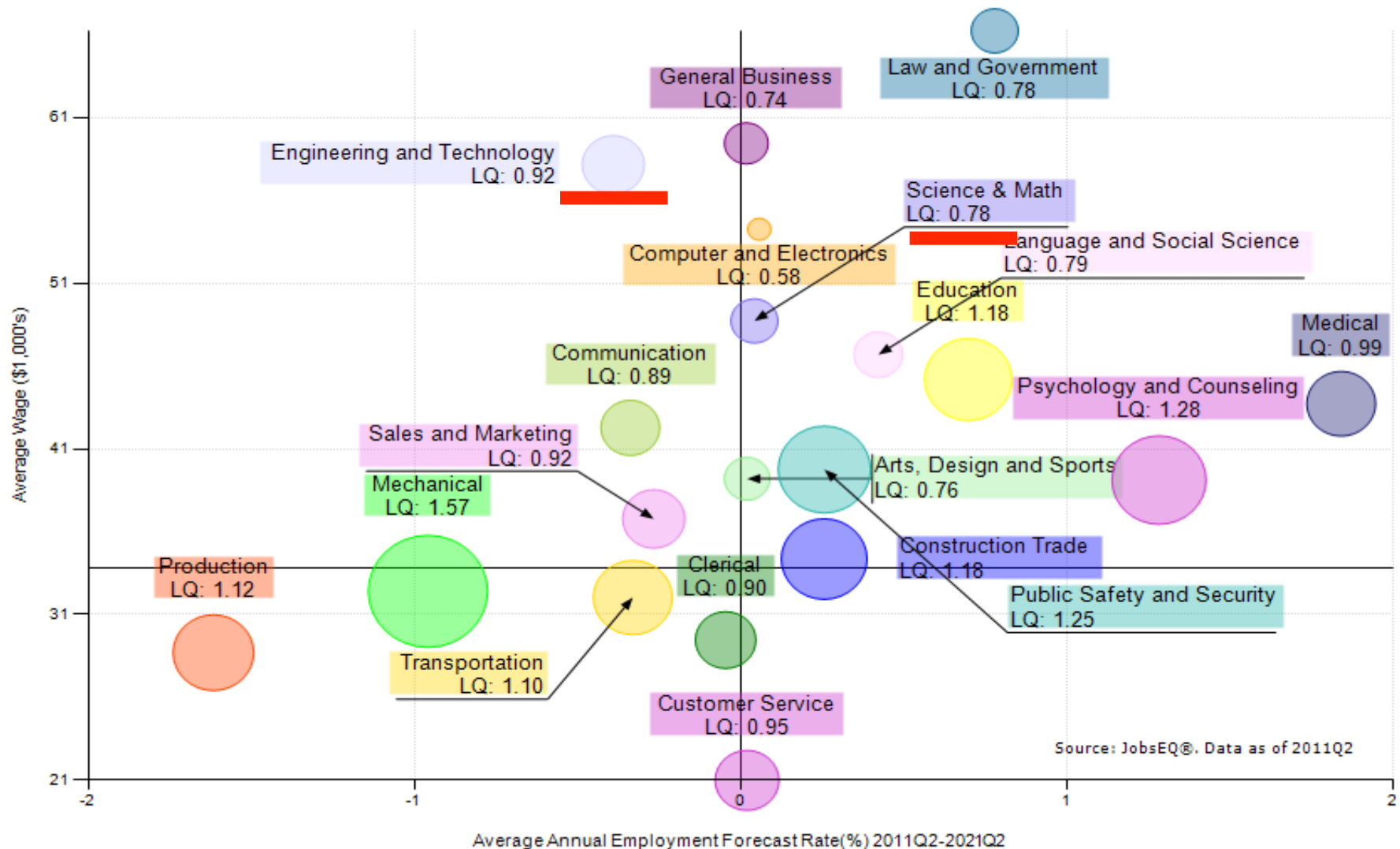
Manufacturing & Mining Share Skills

Occupation Clusters for Southwest as of 2011Q2



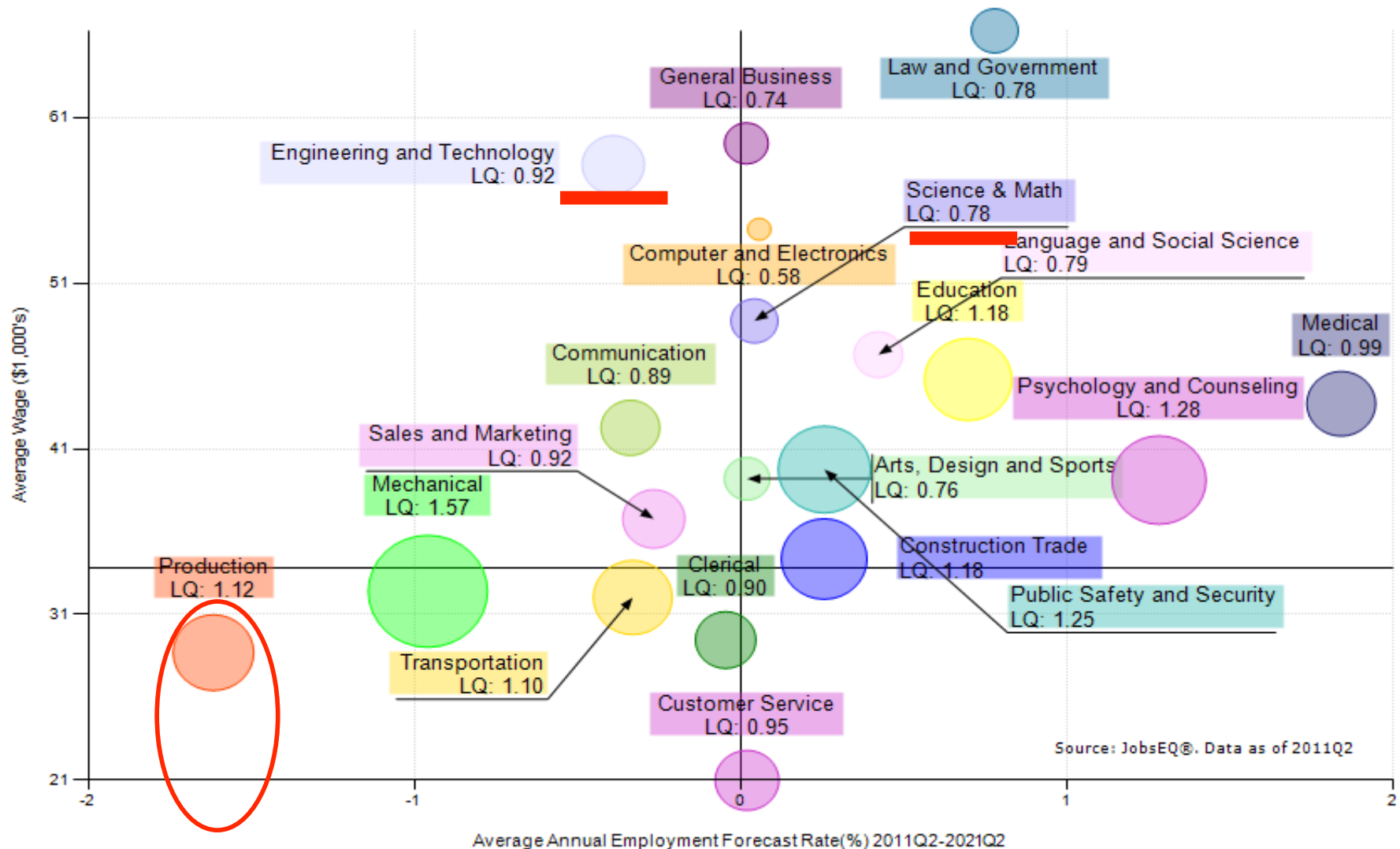
Manufacturing & Mining Share Skills

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Manufacturing & Mining Share Skills

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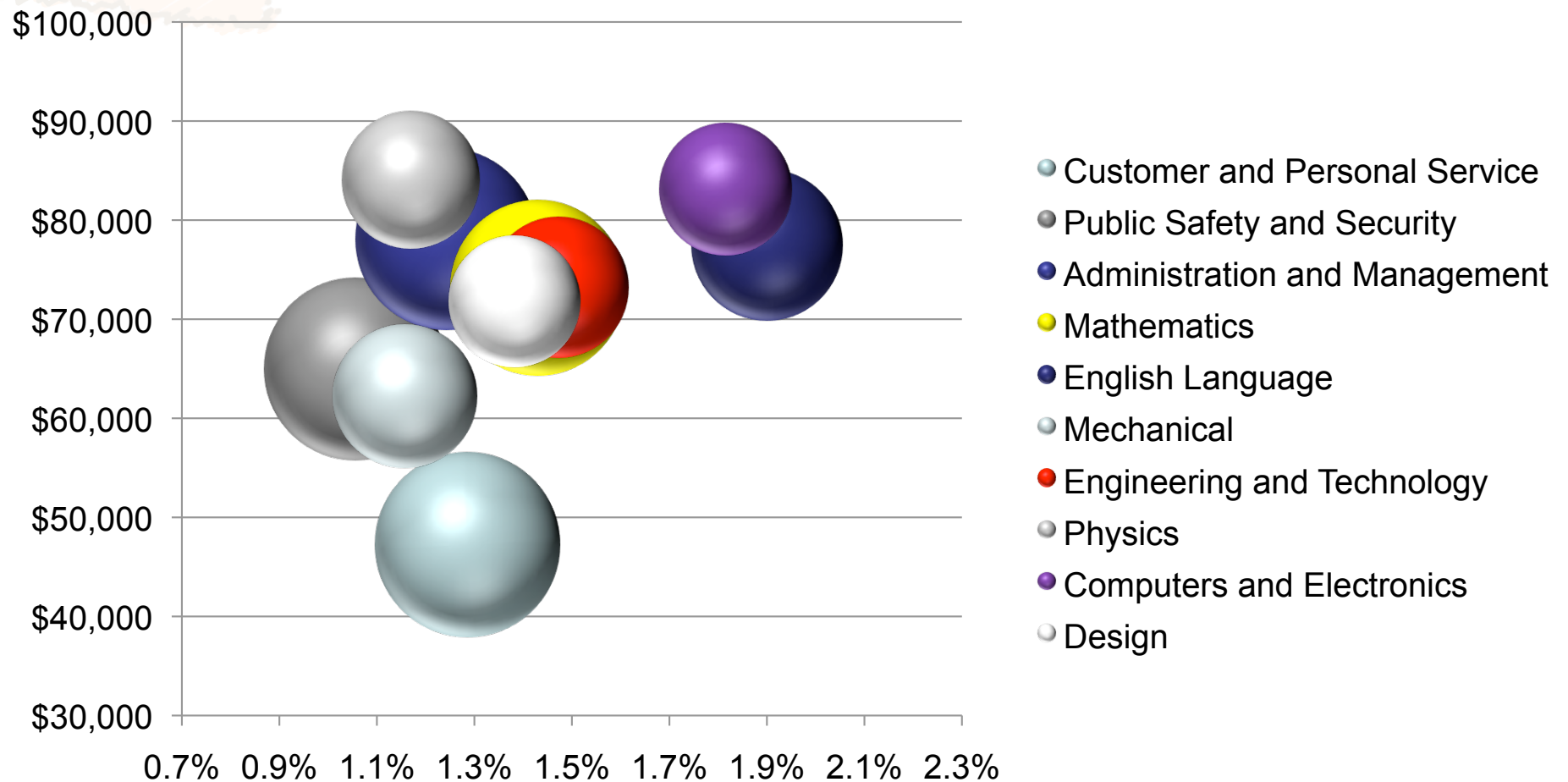
Textile Workers' Skills Not Easily Transferable to Other Industries

Alternative Occupations for Textile Knitting and Weaving Machine Setters, Operators, and Tenders in Southwest

Occupation Title	Approx. Training Rank	Current Empl	Total Avg Annual Demand
Helpers--Production Workers	1	527	9
Mail Clerks and Mail Machine Operators, Except Postal Service	2	106	2
Shoe and Leather Workers and Repairers	3	3	0
Pourers and Casters, Metal	4	7	0
Printing Machine Operators	5	82	2

Basic Transferable Skills are in All Occupations

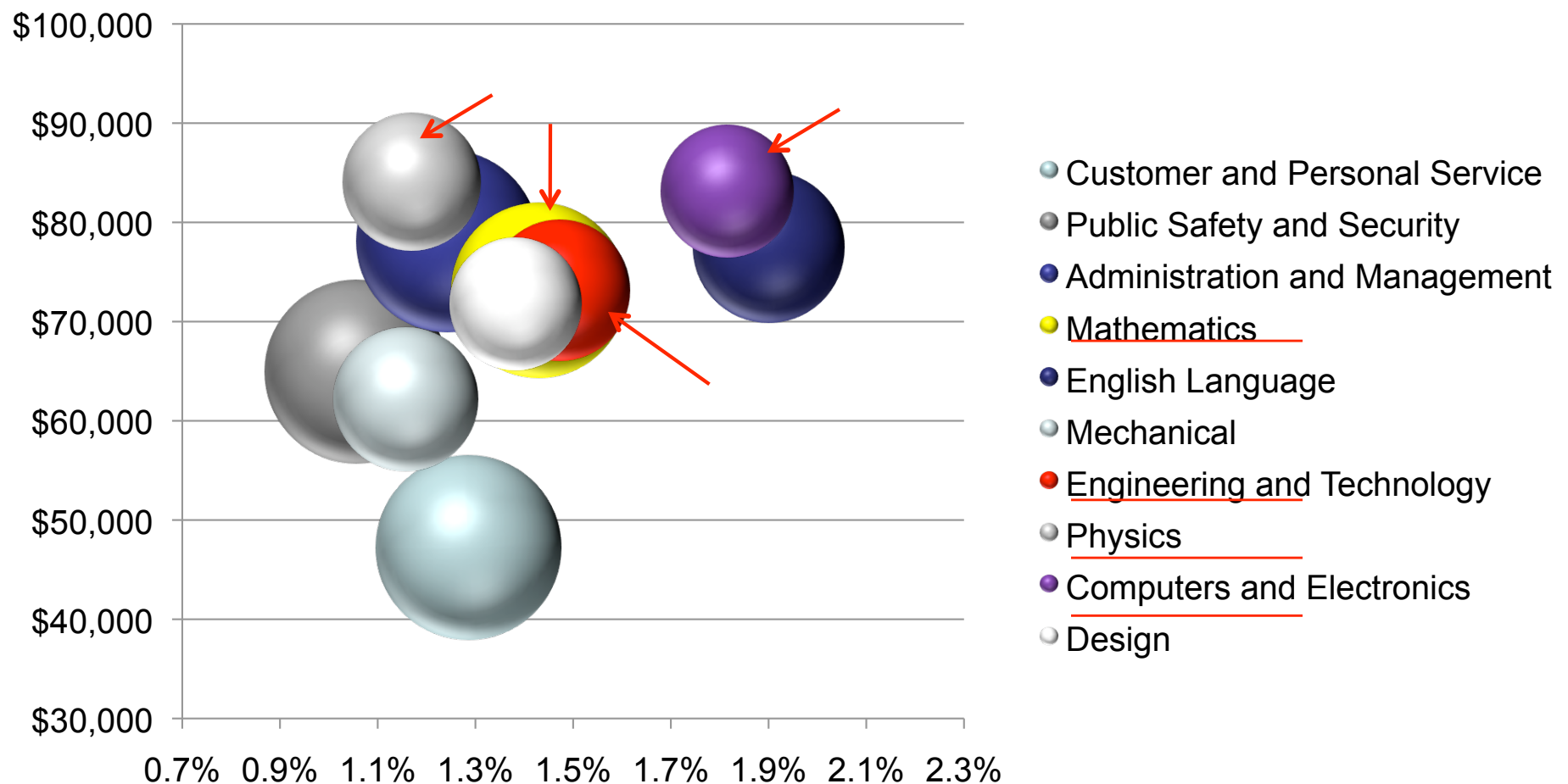
VA Aerospace Skills Clusters - Top Half Knowledge



Source: Chmura Economics & Analytics.

Basic Skills in Aerospace are Strong in STEM

VA Aerospace Skills Clusters - Top Half Knowledge



Source: Chmura Economics & Analytics.

Southwest Virginia

Industry	Four Quarters Ending with 2011q2			10-Year Forecast
	Employment	Avg. Annual Wages	Location Quotient	Avg. Annual Growth
Agriculture, Forestry, Fishing and Hunting	578	\$23,171	0.46	-1.1%
Mining, Quarrying, and Oil and Gas Extraction	6,356	\$73,902	8.45	-1.5%
Utilities	899	\$57,177	1.02	-0.8%
Construction	7,860	\$41,352	1.28	0.8%
Manufacturing	17,925	\$40,088	1.42	-2.3%
Wholesale Trade	4,070	\$39,195	0.68	-0.6%
Retail Trade	19,624	\$21,403	1.24	-0.6%
Transportation and Warehousing	4,441	\$38,113	0.82	-0.4%
Information	1,935	\$37,400	0.63	-1.0%
Finance and Insurance	3,008	\$35,702	0.5	-0.4%
Real Estate and Rental and Leasing	904	\$29,240	0.42	-0.2%
Professional, Scientific, and Technical Services	3,464	\$40,903	0.42	1.7%
Management of Companies and Enterprises	1,520	\$79,683	0.75	-0.5%
Administrative and Support and Waste Management and Remediation Services	5,857	\$28,679	0.71	0.7%
Educational Services	15,239	\$29,943	1.15	1.4%
Health Care and Social Assistance	20,808	\$32,913	1.05	1.6%
Arts, Entertainment, and Recreation	1,202	\$21,072	0.48	0.5%
Accommodation and Food Services	11,064	\$13,388	0.9	-0.3%
Other Services (except Public Administration)	3,726	\$27,425	0.77	-0.1%
Public Administration	9,259	\$35,465	1.14	0.1%
Total All Industries	139,738	\$33,584	1	0.1%

Source: Chmura Economics & Analytics' JobsEQ.

Northern Virginia Metropolitan Area

Industry	Four Quarters Ending with 2011q2			10-Year Forecast
	Employment	Avg. Annual Wages	Location Quotient	Avg. Annual Growth
Agriculture, Forestry, Fishing and Hunting	1,246	\$26,489	0.11	0.0%
Mining, Quarrying, and Oil and Gas Extraction (nd)	<1,000	>\$70,000	<.1	-0.2%
Utilities	5,038	\$91,802	0.64	0.1%
Construction	66,623	\$56,410	1.21	1.9%
Manufacturing	22,068	\$67,362	0.19	-0.5%
Wholesale Trade	27,830	\$94,720	0.52	0.6%
Retail Trade	132,692	\$29,286	0.93	0.6%
Transportation and Warehousing	42,364	\$54,425	0.87	0.9%
Information	42,324	\$100,149	1.53	1.0%
Finance and Insurance	41,422	\$94,511	0.77	0.9%
Real Estate and Rental and Leasing	20,676	\$55,327	1.08	1.3%
Professional, Scientific, and Technical Services	252,695	\$105,878	3.38	4.0%
Management of Companies and Enterprises	26,702	\$129,702	1.47	0.7%
Administrative and Support and Waste Management and Remediation Services	73,455	\$47,482	0.98	2.0%
Educational Services	107,867	\$45,546	0.91	2.6%
Health Care and Social Assistance	112,009	\$49,863	0.63	2.6%
Arts, Entertainment, and Recreation	23,919	\$31,766	1.07	1.7%
Accommodation and Food Services	99,247	\$20,471	0.9	0.9%
Other Services (except Public Administration)	55,177	\$49,378	1.27	1.6%
Public Administration	101,409	\$93,667	1.39	1.3%
Total All Industries	1,255,345	\$66,291	1	2.0%

Source: Chmura Economics & Analytics' JobsEQ.

Concluding Comments

- Clusters are regional; they need to be identified at a regional level
- Education providers need to understand local industry needs
 - Rolls Royce
 - Thomas Nelson Community College and Newport News Shipbuilding
- Regions without strong clusters will see lackluster growth
- Build clusters by attracting industries that can use transferable skills from declining industries
- Support education/training that leads to transferable skills (STEM)